

Remarks

In response to the non-final office action mailed September 20, 2004, the Applicants respectfully request reconsideration of the rejections and that the case pass to issue in light of the remarks below.

The Examiner has set for the following rejections: (1) claims 1-4, 6-13, and 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S.P.N. 5,362,942 to Vanderslice (hereinafter 'the Vanderslice patent') in view of U.S.P.N. 6,515,456 to Mixon (hereinafter 'the Mixon patent'); and (2) claims 5 and 14-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Vanderslice and Mixon patents in view of U.S.P.N. 6,424,157 to Gollomp (hereinafter 'the Gollomp patent').

Rejection of claims 1-4, 6-13, and 18-20 Under 35 U.S.C. § 103(a)

This rejection is based on the teachings of the Vanderslice and Mixon patents and covers independent claims 1, 10, and 13, which are the only pending independent claims. Each independent claim includes limitations generally directed towards enabling energy flow from a battery in a vehicle to a heater for heating the battery after determining a key-off condition of the vehicle.

The Applicants respectfully submit that the Examiner has failed to set forth a *prima facie* case of obviousness. In particular, there is no motivation to combine the Vanderslice and Mixon patents and the improper combination thereof fails to teach the foregoing limitations of each independent claim. For this reason, the Applicants respectfully submit that claims 1-4, 6-13, and 18-20 are patentable and nonobvious over the cited references.

The Vanderslice patent relates to the field of battery heating systems, such as those used to heat batteries in radio telephone equipment. In contrast, the Mixon patent relates

to the field of hybrid systems having an electric motor and engine, and particularly, it relates to utilizing battery state-of-charge (SOC) to optimize battery and alternator life.

The Vanderslice patent fails to provide any suggestion, motivation, or incentive for determining a key-off condition in a vehicle and enabling heating of a battery in the vehicle in response thereto. The Examiner admits this and asserts that the Mixon patent makes up for this deficiency. In particular, the Examiner asserts that it would be obvious to incorporate the key-off sensor from the Mixon patent in the Vanderslice patent to trigger battery heating in response to determining a vehicle key-off condition.

The Vanderslice patent, however, fails to provide any suggestion, motivation, or incentive to incorporate the key-off sensor, or for that matter, any other teaching of the Mixon patent. In particular, the Vanderslice patent merely relates to battery heating in radio telephone equipment and other small electronic devices. It fails to provide any suggestion, motivation, or incentive for its application in hybrid systems having electric motors and engines, i.e., the systems applicable to the Mixon patent. Moreover, the Vanderslice patent fails to describe any triggers for initiating battery heating, let alone a trigger based on determining a key-off condition of a vehicle. Rather, the only motivation to include the key-off sensor of the Mixon patent is derived from the Applicants' application. The Examiner is engaging in improper hindsight reasoning, and therefore, has failed to establish a *prima facie* case of obviousness as there is not motivation to combine the teachings of the cited references.

Furthermore, even the improper combination of the cited references fails to teach the claimed invention. In particular, the Mixon patent fails to teach enabling battery heating in response to determining a key-off condition of a vehicle. The Vanderslice patent has nothing to do with vehicles and fails to provide any teachings towards heating a battery in response to determining a key-off condition in a vehicle. Therefore, it fails to make of the deficiencies of the Mixon patent. As such, the Examiner has failed to establish a *prima facie* case of obviousness as even the improper combination of the cited references still fails to teach the claimed invention.

In view of the foregoing, the Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness with respect to the rejections of claims 1-4, 6-13, and 18-20. For this reason, the Applicants respectfully submit that claims 1-4, 6-13, and 18-20 are patentable and nonobvious over the cited references.

Rejection of claims 5 and 14-17
Under 35 U.S.C. § 103(a)

Claims 5 and 14-17 depend from the patentable independent claims described above and are rejected in view of the Vanderslice, Arai, and Gollomp patents. The Gollomp patent fails to make up for the above identified deficiencies of the Vanderslice and Arai patents. As such, claims 5 and 14-17 are patentable for at least the same reasons that the independent claims from which they depend are patentable.


Conclusion

For the foregoing reasons, the Applicants respectfully submit that each rejection has been fully replied to and traversed and that the case is in condition to pass to issue. The Examiner is respectfully request to pass this case to issue. The Examiner is invited to contact the undersigned if it would further prosecution of this case to issue.

S/N: 10/709,753
Reply to Office Action of September 20, 2004

Atty Dkt No. 81094665 (FMC 1698 PUS)

Respectfully submitted,
Douglas Zhu, et. al.

By 
John R. Buser
Reg. No. 51,517
Attorney/Agent for Applicant

Date: 10-20-04

BROOKS KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075-1238
Phone: 248-358-4400
Fax: 248-358-3351